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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/625,696

07/24/2003

Kim B. Roberts

9-13528-85us-1

1070

20988

7590

10/28/2004

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EXAMINER

SINGH, DALZID E

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,696

Applicant(s)

ROBERTS ET AL.

Examiner

Dalzid Singh

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-26,28-50,53-67 and 69-77 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-26,28-50,53-67 and 69-77 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 58 is objected to because of the following informalities:

Claim 58 depends on a cancelled claim 68. It appears that claim 58 should depend on claim 75. Appropriate correction is required.

Claims 76 recites, "...adpated..." in line 1. It appears that this is typographical error. Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 2-26, 28-50, 53-67, 69-77 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-66 of U.S. Patent No. 6,687,464. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims in the continuation are broader than the ones in the patent, *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); and *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982), broad claim in continuation application are rejected as obvious double patenting over previously patented narrow claims. For example, claims 69 and 72 of the present invention is the same as claim 1 of the patent except the method of obtaining respective optimum setting of each system parameter on the basis of the fiber identification. Therefore, claims 69 and 72 of the present invention is broader than claim 1 of the patent.

Regarding claims 70 and 73, both the patent and present invention claim the step of obtaining information identifying the optical fiber medium comprises a step of obtaining a class ID respecting the optical fiber medium (see claim 1).

Regarding claims 71 and 74, both the patent and present invention claim the step of adjusting a respective value of the system parameter comprises steps of

- a) obtaining a respective optimum setting of a system parameter on a basis of the obtained information; and
- b) adjusting the respective value of the system parameter in accordance with

the obtained optimum setting (see claim 1).

Regarding claims 2 and 28, both the patent and present invention claim the step of obtaining a class ID respecting the optical fiber medium comprises a step of receiving a fiber ID respecting the optical fiber medium (see claim 2).

Regarding claims 3 and 29, both the patent and present invention claim the fiber ID is manually entered into the optical communications system (see claim 3).

Regarding claims 4 and 30, both the patent and present invention claim the step of receiving a fiber ID comprises the steps of:

probing the optical fiber medium for the presence of a predetermined marking containing information of the fiber ID; and

if a marking is detected, reading information of the fiber ID from the marking (see claim 4).

Regarding claims 5 and 31, both the patent and present invention claim the predetermined marking is a Bragg grating. (see claim 5).

Regarding claims 6 and 32, both the patent and present invention claim a step of using the fiber ID to query across-reference table comprising a list of fiber ID's and a class ID associated with each fiber ID, to obtain the class ID respecting the optical fiber medium (see claim 6).

Regarding claims 7 and 33, both the patent and present invention claim the step of obtaining a class ID comprises the steps of:

a) discovering a value of at least one fiber transmission property of the optical fiber medium;

- b) providing a class definition table comprising a plurality of class definitions, each class definition including at least:
 - i) a respective class ID; and
 - ii) at least one corresponding characteristic transmission property value;
- c) selecting a class ID from the class definition table based on a closest match between corresponding ones of the at least one fiber transmission property value and the at least one characteristic transmission property value (see claim 7).

Regarding claims 8 and 34, both the patent and present invention claim each characteristic transmission property value comprises a respective nominal value, and an allowable tolerance defining a value range of the characteristic transmission property (see claim 8).

Regarding claims 9 and 35, both the patent and present invention claim step of raising an alarm if any one fiber transmission property value does not lay within the value range of the corresponding characteristic transmission property, for any of the plurality of class definitions of the class definition table (see claim 9) .

Regarding claims 10 and 36, both the patent and present invention claim the step of obtaining a value of at least one fiber transmission property comprises a step of testing the optical fiber link in situ (see claim 10).

Regarding claim 11, both the patent and present invention claim the step of obtaining a value of at least one fiber transmission probe comprises a step of testing the optical fiber link prior to installation (see claim 11).

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Regarding claims 12 and 37, both the patent and present invention claim the step of obtaining a value of at least one fiber transmission property comprises obtaining a respective value of any one or more of a total optical signal dispersion:

- a zero dispersion wavelength;

- an average optical signal attenuation;

- a length of the fiber;

- a total dispersion per unit length of the fiber; and an average attenuation per unit length of the fiber (see claim 12).

Regarding claims 13 and 38, both the patent and present invention claim the at least one characteristic transmission property value comprises a respective value of any one or more of the zero dispersion wavelength:

- the total dispersion per unit length of the fiber; and

- the average attenuation per unit length of the fiber (see claim 13).

Regarding claims 14 and 39, both the patent and present invention claim the at least one characteristic transmission property value comprises a respective value of each one of the zero dispersion wavelength and the total dispersion per unit length of the fiber (see claim 14).

Regarding claims 15 and 40, both the patent and present invention claim the step of selecting a class ID comprises the steps of

- a) comparing each respective fiber transmission property value to a corresponding characteristic transmission property value within each class definition of the class definition table; and

b) selecting the class ID of a one of the plurality of class definitions for which each characteristic transmission property value most closely matches a corresponding fiber transmission property value (see claim 15).

Regarding claims 16 and 41, both the patent and present invention claim the step of obtaining a respective optimum setting of each system parameter comprises a step of searching a system table comprising a plurality of system definitions, each system definition including a respective class ID and a corresponding optimum setting for each parameter (see claim 16).

Regarding claims 17 and 42, both the patent and present invention claim all of the system definitions of the system table pertain to a predetermined set of one or more related optical communications systems (see claim 17).

Regarding claims 18 and 43, both the patent and present invention claim the system parameters comprises any one or more of a transmission wavelength; a signal power, and a received signal detection threshold (see claim 18).

Regarding claims 19 and 44, both the patent and present invention claim the step of adjusting a respective value of each system parameter comprises a step of adjusting a transmission wavelength of one or more lasers of the optical communications system (see claim 19).

Regarding claims 20 and 45, both the patent and present invention claim the transmission wavelength of each laser is adjusted independently (see claim 20).

Regarding claims 21 and 46, both the patent and present invention claim the transmission wavelength is adjusted by tuning (see claim 21).

Regarding claim 22, both the patent and present invention claim the transmission wavelength is adjusted by means of one or more filters (see claim 22).

Regarding claims 23 and 47, both the patent and present invention claim the step of adjusting a respective value of each system parameter comprises a step of adjusting a signal power of one or more lasers of the optical communications system (see claim 23).

Regarding claims 24 and 48, both the patent and present invention claim the signal power of each laser is adjusted independently (see claim 24).

Regarding claims 25 and 50, both the patent and present invention claim the step of adjusting a respective value of each system parameter comprises a step of adjusting a detection threshold of one or more optical signal detectors of the optical communications system.

Regarding claims 26 and 49, both the patent and present invention claim the detection threshold of each optical signal detector is adjusted independently (see claim 26).

Claim 75 of the present invention is the same as claim 51 of the patent except that the control unit is being adapted to obtaining respective optimum setting of each system parameter, based on the class ID. Therefore, claim 75 of the present invention is broader than claim 51 of the patent.

Regarding claim 76, both the patent and present invention claim the controller unit is adapted to obtain the information identifying the optical fiber medium by obtaining a class ID respecting the optical fiber medium (see claim 52).

Regarding claim 77, both the patent and present invention claim the controller unit is adapted to adjust the respective value of the system parameter by:

- a) obtaining a respective optimum setting of a system parameter on a basis of the obtained information; and
- b) adjusting a respective value of the system parameter in accordance with the obtained optimum setting (see claim 51).

Regarding claim 53, both the patent and present invention claim the class ID comprises a fiber ID respecting the optical fiber medium (see claim 52).

Regarding claim 54, both the patent and present invention claim the fiber ID is manually entered into the optical communications system (see claim 53).

Regarding claim 55, both the patent and present invention claim the controller is adapted to:

- control the transceiver to probe the optical fiber medium for the presence of a predetermined marking containing information of the fiber ID; and
- if a marking is detected, read information of the fiber ID from the marking (see claim 54).

Regarding claim 56, both the patent and present invention claim the predetermined marking is a Bragg grating (see claim 55).

Regarding claim 57, both the patent and present invention claim the controller is further adapted to use the fiber ID to query a cross-reference table comprising a list of fiber ID's and a class ID associated with each fiber ID, to obtain the class ID respecting the optical fiber medium (see claim 56).

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Regarding claim 58, both the patent and present invention claim the controller is adapted to obtain a class ID by:

- a) discovering a value of at least one fiber transmission property of the optical fiber medium;
- b) searching a class definition table comprising a plurality of class definitions, each class definition including at least:
 - i) a respective class ID; and
 - ii) at least one corresponding characteristic transmission property value; and
- c) selecting a class ID from the class definition table based on a closest match between corresponding ones of the at least one fiber transmission property value and the at least one characteristic transmission property value (see claim 57).

Regarding claim 59, both the patent and present invention claim wherein each characteristic transmission property value comprises a respective nominal value, and an allowable tolerance defining a value range of the characteristic transmission property (see claim 58).

Regarding claim 60, both the patent and present invention claim the controller is further adapted to raise an alarm if any one fiber transmission property value does not lay within the value range of the, corresponding characteristic transmission property, for any of the plurality of class definitions of the class definition table (see claim 59).

Regarding claim 61, both the patent and present invention claim the at least one fiber transmission property comprises any one or more of:

- a total optical signal dispersion;

- a zero dispersion wavelength;
- an average optical signal attenuation;
- a length of the fiber;
- a total dispersion per unit length of the fiber; and
- an average attenuation per unit length of the fiber (see claim 60).

Regarding claim 62, both the patent and present invention claim 62 the at least one characteristic transmission property value comprises a respective value of any one or more of the zero dispersion wavelength; the total dispersion per unit length of the fiber; and the average attenuation per unit length of the fiber (see claim 61).

Regarding claim 63, both the patent and present invention claim the at least one characteristic transmission property value comprises a respective value of each one of the zero dispersion wavelength and the total dispersion per unit length of the fiber (see claim 62).

Regarding claim 64, both the patent and present invention claim the controller is adapted to select a class ID by:

- a) comparing each respective fiber transmission property value to a corresponding characteristic transmission property value within each class definition of the class definition table; and
- b) selecting the class ID of a one of the plurality of class definitions for which each characteristic transmission property value most closely matches a corresponding fiber transmission property value (see claim 63).

Regarding claim 65, both the patent and present invention claim the controller is adapted to obtain a respective optimum setting of each system parameter by searching a system table comprising a plurality of system definitions, each system definition including a respective class ID and a corresponding optimum setting for each system parameter (see claim 64).

Regarding claim 66, both the patent and present invention claim wherein all of the system definitions of the system table pertain to a predetermined set of one or more related optical communications systems (see claim 65).

Regarding claim 67, both the patent and present invention claim wherein the one or more system parameters comprises any one or more of: a transmission wavelength; a signal power; and a received signal detection threshold (see claim 66).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Inoue et al (US Patent No. 5,506,674) is cited to show method for identifying an optical fiber using a pattern of relected light.

Horiuchi et al (US Patent No. 6,185,020) is cited to show apparatus for detecting a fault location in an optical fiber line.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272--3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS

October 22, 2004

David Singh